Losterin cream in the treatment of diseases accompanied by keratinization disorder

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Despite of the fact, that psoriasis is a system disease, the main attention in its treatment and prevention is targeted at the external therapy. Due to this fact, regardless of psoriasis form, besides the system therapy, there always assigned a local treatment depending on the stage, peculiarities and demonstration of the disease, its localization and the size of effected area. Regardless of the stage of the process, patients are prescribed unaggressive soothing medications in a form of pasts or creams. Since the old days fatty substances have been used to nurture and smoothen skin, as it penetrates directly into epidermis, and provides elasticity and smoothness to the horny layer. Application of fat on skin terminates respiration process, increases microcirculation due to hermetization, and as a result it accelerates infiltration dispersion, restores turgor and elasticity.

Subjectively, the patients noted reduction of skin tightening, dryness, burning. Patients were recommended to use mineral butter, creams with glycerin, urea, lactic acid. The usage of softening medications as a basic external therapy allows to minimize exfoliation, to restore elasticity of the affected skin areas. Medications with anti-inflammatory and keratolytic effect (1, 2, 3, 4) are prescribed as a main topic therapy at an advanced stage. As a rule, it may be corticosteroid or combined medications, containing corticosteroid and salicylic acid in a concentration of 2 to 5% (5,6). Topic corticosteroids have an anti-inflammatory, hyposensitizative and antiproliferative action. Their influence causes deceleration of glucosamineglucan, collagen and elastin synthesis, Langerhans cells disappear from epidermis, and mast cell disappear from derm, besides, it causes a decrease of vascular permeability. Antiproliferative effect of local corticosteroids is defined by nucleic acid synthesis deceleration (firstly DNA) in the sells of epidermis basal layer, derm fibroblast, and deceleration of T-lymphocyte proliferation. During psoriasis progressing stage, glucocorticosteroids of medium and high power should be prescribed, for example - mometasone furoate (Momate, Elocom), clobetasol (Pauerkort), betamethasonedipropionate (Diprosalic, Belosalic) for duration of 7 to 10 days, 1 or 2 applications per day in a form of cream or paste, depending of process localization. The combined medications which contain corticosteroids and salicylic acid (Diprosalic, Belosalic, Elocom C, Mosat C, Akriderm SK) have proved to be reliable for progressive forms of psoriasis. Combined medications of corticosteroids and salicylic acid prove to be effective in psoriasis treatment.

Just as effective for an external psoriasis therapy are medications with synthetic analogues D3-calcipotriol, which is included into such medications as Proscutan, Daivonex, Daivobet. Anti-psoriasis action of calcipotriol are provided by its ability to interact with specific receptors in keratinocyte, causing dose-related proliferation deceleration of these skin cells and accelerating its morphological differentiation. Daivobet consists of daivonex and betamethasone, the combination of calcipotriol and corticosteroids highly increase its effectiveness.

However, when selecting a topic therapy for psoriasis, it is necessary to remember that all above-mentioned medications have a number of downsides. Thus, long term application of corticosteroids leads to a number of side effects, such as skin atrophy, telangiectasia, steroid

acne. Due to that, it is not recommended to use topic corticosteroids for longer than 2 weeks.

Calcipotriol medications, on the other hand, require a long-term constant application and the desirable medical effect arises only after a long period of time. In connection with that one of the most important tasks for dermatology is a search for alternative means of topic therapy of psoriasis. One of such medications is Losterin. It contains salicylic acid, naphtalan, urea, D-panthenol, Japanese pagoda tree extract, almond oil.

The healing properties of naphtalan oil have been known for over a hundred years. The first works on naphtalan effectiveness in dermatology are dated 1898 (7,8). Naphtalan oil has unique healing properties: anti-anesthetic, vasodilating and stimulating. Naphtalan inactivates the actions of inflammation mediators, stimulates local processes of microcirculation, activates tissue metabolism, accelerates wound healing process, stimulates adrenocortical hormone production, possesses densensitise, antipruritic action, has antibacterial and sun-protective effect (9).

Salicylic acid, which softens exfoliating layers of psoriasis plaques easily penetrates into skin, increasing the ability of other medications to penetrate inside the skin via changed, thicker horny layer.

Urea is an effective skin moisturizer, which possesses exfoliating, wound healing, bacteriostatic action, serves as a conductor for other active substances of the medication.

D-panthenol (pro-vitamin B 5) stimulates skin and mucous coat regenerations, normalizes cells metabolism, increases mitosis and the strength of collagen fibers.

Japanese pagoda tree extract includes alkaloid and flavonoids complex (including rutin), possessing a strong anti-inflammatory, antipruritic, exfoliating, antifungal and bacteriostatic action, strengthens vascular walls and increases its endurance. Almond oil regulates lipid and water skin balance, activates cell regeneration process, has a cleansing, smoothing, and nourishing properties. We had 25 patients with a psoriasis vulgaris in a stationary or regressive stages with a different localization and 5 patients with a diagnosis of chronic dyshydrotic eczema of palms and feet. All patients received Losterin twice a day for the affected area as a mono-therapy. On day 7, all the patients with eczema noted reduction of dryness and tightness of skin, cracks epithelialization, absence of pruritus. Significant improvement had been noted by 14-18 day of the therapy and characterized by the decrease of the clinical demonstrations. For the patients with psoriasis, exfoliation on the effected area had disappeared by day 7 – 10, cracks epithelialization in the area of palms and feet had disappeared by 10 – 14 day.

Further application of Losterin cream on standard plaques led to a complete regress of eruption. All mentioned above allows to recommend Losterin medication in a combination with other topic medications for moderate psoriasis forms, as well as a mono-therapy for psoriasis light form. It may be also recommended for eczema of palms and feet, accompanied by hyperkeratosis.

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